

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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January 29, 2007

Magalie R. Salas, Secretary Federal Energy Regulatory Commission 888 First Street, N. E., Room 1A Washington, D.C. 20426

SUBJECT: EPA Comments on the FERC Final Environmental Impact Statement (Final EIS) for the FERC "Casotte Landing LNG Project" (December

2006); FERC/EIS-0193; OEP/DG2E/Gas Branch 2; Bayou Casotte

Energy, LLC; Docket Nos. PF05-9-000 and CP05-420-000

Dear Ms. Salas:

Under Section 309 of the Clean Air Act (CAA) and Section 102(2)(C) of the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (EPA) Region 4 has reviewed the Federal Energy Regulatory Commission's (FERC or Commission) final EIS for the "Casotte Landing LNG [Liquefied Natural Gas] Project" proposed by the applicant (Bayou Casotte Energy). Under Section 309 of the CAA, EPA is responsible for reviewing and commenting on major federal actions significantly affecting the quality of the human environment. EPA also serves as a cooperating agency during the NEPA process and has previously submitted comments on the draft EIS on July 24, 2006. Our review of the final EIS includes comments with respect to both EPA roles.

The final EIS evaluates the environmental impacts of construction and operation of an LNG import terminal complex in the Port of Pascagoula in Jackson County, Mississippi, and associated natural gas pipeline interconnects and spur. This onshore terminal would include marine and onshore facilities that receive, store and re-gasify (vaporize) LNG to be transhipped to various end-users by a pipeline system. The import terminal would consist of three full containment storage tanks, the LNG re-gasification ("closed-loop") system using warming water from the adjacent Chevron refinery, and operational equipment, including support/pipeline interconnects, electric transmission, waste heat circulation and infrastructure. Condensate from the re-vaporization system would be directed back to the Chevron refinery for reuse. The LNG facility would have the capacity to re-vaporize and deliver natural gas at a continuous rate of nominally 1.3 billion cubic feet per day.

Two existing Chevron Pascagoula Refinery crude oil tanker berths would be reconfigured to accommodate operation of the new facility. Approximately 3.5 million cubic yards (mcy) of new work dredged material is proposed for disposal at the existing ocean dredged material disposal site south of Horn Island (Pascagoula Ocean Dredged

Material Disposal Site (ODMDS)), with the subsequent maintenance dredged material (approximately 250,000 cubic yards per year) also proposed for ODMDS disposal.

As we noted in our comments on the draft EIS, we continue to recognize the importance of bringing additional natural gas supplies into the Gulf of Mexico region. EPA raised several issues in these earlier comments regarding the potential impacts of the project and the analyses presented in the draft EIS. We are pleased that FERC has presented additional information and analyses in the final EIS, including appropriate revisions to the text from the draft EIS and responses to our draft EIS comments in Appendix H.

EPA supports the selected preferred alternative for the proposed project with the FERC staff's mitigation measures identified in the final EIS. However, while the majority of our comments on the draft EIS have been addressed, we request that FERC and the applicant give further consideration to addressing the remaining comments. Outstanding issues include: air quality, risk analysis, and wetland impacts. Additional details regarding these issues, as well as other concerns, are presented in the enclosed Detailed Comments.

EPA looks forward to working with FERC staff and representatives of the applicant, as well as other relevant federal and state agencies, so that the appropriate information and analysis is available in the Commission's docket and the Commission's Order contains an appropriate discussion of these remaining environmental issues.

Thank you for the opportunity to review and comment on this final EIS. If you have further questions, please contact me at 404/562-9611 (or mueller.heinz@epa.gov) or John Hamilton of my staff at 404/562-9617 (or hamilton.john@epa.gov).

Sincerely,

Heinz J. Mueller, Chief NEPA Program Office

Enclosure

cc: Ms. Maya Rao, Mississippi Department of Environmental Quality

DETAILED COMMENTS

AIR QUALITY

Provided below are: 1) EPA's comments on FERC's responses to significant air quality comments on the draft EIS in Appendix H of the final EIS, and 2) EPA's comments on the new air quality analyses provided in this final EIS. We preface these comments with our understanding of the basis for the air quality analyses.

Please note that EPA recently received a copy of the applicant's January 10, 2007, submittal to Mississippi Department of Environmental Quality (MDEQ) of a compilation of updated air modeling reports. Although the following air quality comments are specific only to the final EIS, EPA will provide MDEQ comments on these modeling reports under a separate cover in the near future.

Basis for Analyses

As indicated in Section 4.11.1.3 of the final EIS, EPA has established National Ambient Air Quality Standards (NAAQS) for criteria pollutants to protect human health and public welfare. EPA has also established the New Source Review (NSR) permitting program including Prevention of Significant Deterioration (PSD) review. The MDEQ has adopted these Standards, as well as the NSR program. Although it appears based on our review of the EIS that the project will not involve construction of a major source requiring an NSR permit, we anticipate that a project's potential emissions will be considered in subsequent assessments of compliance with the NAAQS and PSD increments, depending on the status of the minor source baseline data for the individual pollutants in the source's impact area.

Although the final EIS does not provide specific supporting information on the provided air quality modeling (e.g., input emissions, meteorological data, assumptions, procedures, etc.), in the final EIS, FERC chose to demonstrate compliance with the NAAQS and other regulatory standards by following the modeling guidance provided in 40 CFR Part 51, Appendix W (Guideline on Air Quality Models; November 9, 2005) and EPA's New Source Review Workshop Manual (Draft October 1990). These guidance documents provide appropriate and accepted modeling procedures to address the NAAQS and PSD standards. Although FERC was not necessarily required to follow this guidance for purposes of the final EIS, since FERC has chosen to do so, our comments on the air quality modeling are based on the use of the guidance provided in these documents, as well as the NEPA requirement for disclosure of reasonably foreseeable air quality impacts.

The modeling procedures were only partially followed and some important analyses were not performed. Further justification may be needed to fully support the FEIS conclusion that there are no significant project impacts on air quality in the vicinity of the project and the nearest PSD Class I area.

EPA Comments on FERC Responses

FA4-6 (Detailed emission information) - Although estimated project emissions for both the construction and operation of the facility were provided in Tables 4.11.1-3 and 4.11.1-4, respectively, detailed information on the bases for the estimated emissions was not provided. EPA recommends that FERC staff provide the detailed emission calculation information in the Commission's docket.

FA4-7 (Qualitative ambient air quality assessment) - The final EIS does contain air quality modeling to address EPA's comment on the draft EIS. However, the project-only emissions modeling and the cumulative impact modeling used in the final EIS do not follow EPA's guidance referenced in the *Basis for Analyses* section of these comments, and no explanation is offered to justify using other modeling procedures. In addition, detailed information on the bases for the air quality modeling was not provided in the final EIS. We have provided additional comments on the air quality analyses below under EPA Comments on the Additional Analyses Provided in the Final EIS.

FA4-8 (Bases for air quality modeling) - The information requested by EPA was not provided. The final EIS indicates the information is available in the project's public record. We were unable to locate the requested information. EPA recommends that this information be made available to us and disclosed to the public in the Commission's Order and docket to allow for a complete review and analysis of the potential air quality impacts. We look forward to working with you to obtain the requested information.

FA4-12 (Recommendations and conclusions) - Although the final EIS includes additional information on the construction emissions and anticipated impacts, we remain concerned that the basis for this analysis may not be appropriate without further justification. As noted below in Section 5.1.11 of the following EPA Comments on the Additional Analyses Provided in the Final EIS, FERC's conclusions regarding air quality may need to be revised.

EPA Comments on Additional Analyses Provided in Final EIS

Section 4.11.1.4 -Air Quality Impacts and Mitigation

<u>Project Emissions</u> – Although project emissions for both the construction and operation of the facility were provided in Tables 4.12.1-2 and 4.12.1-3, respectively, detailed information on the bases for the estimated emissions was not provided. Also, only total project hazardous air pollutant (HAP) emissions are provided in the text. EPA recommends the detailed emission calculation information be provided in the Commission's docket.

<u>Construction Impact Assessment</u> - Although the final EIS includes information on the construction emissions, there does not appear to be an impact assessment supporting the conclusion of no significant impact to regional air quality. This conclusion may not be appropriate without further justification.

Operational Impact Assessment - The final EIS does contain air quality modeling. However, the project-only emissions modeling and the cumulative impact modeling used in the final EIS do not follow EPA's guidance, and no explanation is offered to justify using other modeling procedures. The following comments are associated with this assessment.

- When project impacts are significant, additional cumulative impact modeling
 may be needed to ensure compliance with NAAQS and PSD increments. EPA
 recommends that the Commission's Order address the need to perform this
 cumulative impact modeling and that the modeling results be made available in
 the docket.
- To be consistent with the guidance referenced in the Basis for Analyses section of these comments, without further justification, the VISTAS/BART protocol may not be the appropriate procedure for Class I area impacts assessments.
- Although the Casotte Landing LNG Project does not need to obtain a PSD air
 quality permit, the project's emissions may consume PSD increment. As FERC
 indicated (pg. 4-94 of final EIS), refined PSD Class I and PSD Class II modeling
 analyses of potential impacts are important. PSD increment compliance has not
 been addressed in the final EIS. We recommend FERC address compliance with
 the PSD increment in the Commission's Order and provide the relevant
 information in the docket.
- To assess compliance with the NAAQS, Table 4.11.1-5 adds the project-only impacts to the background monitoring concentrations. To be consistent with the guidance referenced in the Basis for Analyses section of these comments, without further justification, this may not be an accepted procedure to assess NAAQS compliance. We recommend cumulative impact modeling be performed for "project-only" emission impacts greater than significant impact levels (SIL) to assess PSD increment and NAAQS compliance.

We recommend FERC staff provide additional specific information on the modeling (e.g., input emissions, assumptions and procedures used) in the docket. We recommend that this additional information include electronic versions of the input and output modeling files.

Section 4.13.9 Cumulative Impacts - Air Quality and Noise

<u>Cumulative Impacts</u> – The final EIS provides a cumulative impact assessment of the proposed Casotte Landing LNG Project with the construction and operation of two other projects (*i.e.*, LNG Clean Energy Project and Chevron Pascagoula Refinery Expansion). The final EIS compares the estimated emissions for these projects to the total emissions in Jackson County. It also provides Class II impacts for the two proposed LNG projects in the area: Casotte Landing LNG and LNG Clean Energy. Because FERC indicated that estimated emissions for the Chevron Refinery expansion were unavailable, the

Chevron Refinery expansion has not been included in any modeling. The following comments are associated with this cumulative impacts assessment.

- To be consistent with the guidance referenced in the Basis for Analyses section of these comments, EPA recommends that the cumulative impact analysis not be limited to only the three proposed projects in Table 4.13.9-1. EPA recommends that the cumulative impact analysis include the existing Chevron Refinery operations, the planned expansion, and any other existing industrial sources. We also recommend that the Commission's Order address the need to perform this cumulative impact analysis and that the results be made available in the docket.
- The final EIS states that all Class I and Class II project impacts are below the applicable SIL and NAAQS, respectively. The final EIS's approach to address Class II NAAQS compliance (i.e., adding the "project only" impacts to the background monitoring concentration), without further justification, does not appear to be appropriate. EPA recommends that FERC conduct a cumulative impact assessment that includes nearby sources with the background monitored concentrations for comparison with the NAAQS. We recommend that this assessment be discussed in the Commission's Order and provided in the docket.
- As noted earlier, although a PSD permit is not required for this proposed project, its emissions may consume PSD increment. We recommend FERC address compliance with the PSD increment and consider the cumulative impact of the three proposed projects in Table 4.13-9.1 and other sources in the affected area to be consistent with the EPA guidance FERC has chosen to follow. Note that the estimated maximum increase in 24-hour SO₂ maximum concentrations for just the two proposed LNG facilities in Table 4.13.9-2 is larger than the PSD increment. The scaled increase in PM₁₀ 24-hour concentration in Table 4.13.9-3 is also larger than the PSD increment.

Section 5.1.11 - Conclusions and Recommendations; Air Quality and Noise

The FERC staff's conclusions regarding air quality may need to be revised based on EPA's comments noted above.

RECOMMENDATIONS (AIR QUALITY): The conclusions regarding air quality reached by FERC staff may need to be revised based on the additional information supplied and modeling analyses conducted in response to EPA's comments. EPA looks forward to working with FERC staff and representatives of the applicant, as well as MDEQ, to address these issues so that the Commission's Order and docket reflects an appropriate consideration of the potential air quality impacts.

Subject matter contacts: Mr. Stan Krivo, 404-562-9123 and Ms. Katy Forney, 404-562-9130.

DREDGED MATERIAL DISPOSAL

The Casotte Landing Natural Gas Import Terminal Project includes a new berthing area that will be dredged to 42 feet Mean Lower Low Water. The total quantity of new work sediments to be dredged, including two feet of advance maintenance, and an allowable overdepth of up to two feet, would be approximately 3.5 million cubic yards (mcy). In a November 1, 2006, Marine Protection, Research, and Sanctuaries Act Section 103 Evaluation, the U.S. Army Corps of Engineers (COE) determined that material from the Casotte Landing Natural Gas Import Terminal Project is suitable for ocean disposal. EPA Region 4 has completed an independent review of COE's Section 103 Evaluation Report, and the supporting document (Casotte Landing Natural Gas Import Terminal Project, Casotte Landing Slip Sediment Evaluation Report - ODMDS Suitability; July 13, 2006) provided to EPA on November 6, 2006. EPA has also completed an independent evaluation of the suitability of dredged material for disposal at the Pascagoula ODMDS.

RECOMMENDATION (DREDGED MATERIAL): EPA has concurred with the COE's determination that the proposed new work dredged material will comply with the criteria set forth in 40 CFR Part 227, and may be disposed at the Pascagoula ODMDS. The applicant also proposes to subsequently dispose project maintenance dredged material at the ODMDS (some 250,000 cubic yards per year). The future project maintenance material is eligible for disposal in the Pascagoula ODMDS. However, because the new proposed LNG facilities and subsequent increased ship traffic constitute potential new sources of contaminants, the proposed maintenance material will need to be evaluated for suitability for ocean disposal, after it accumulates, and before dredging and disposal of the maintenance material can occur.

Subject matter contact: Mr. Doug Johnson, 404-562-9386.

ENVIRONMENTAL JUSTICE ANALYSIS

EPA acknowledges the information provided in the final EIS regarding the demographics and economic status of the City of Pascagoula, Jackson County, and the State of Mississippi. However, we are concerned that the final EIS does not fully address whether the proposed project would result in disproportionately high and adverse human health or environmental effects on minority populations and low-income populations. It is unclear whether pockets of low-income and/or minority populations reside in close proximity to the proposed facility. In addition, we recommend considering the cumulative impacts of the refinery and another proposed LNG facility located within the same area.

RECOMMENDATION (ENVIRONMENTAL JUSTICE): EPA recommends that FERC staff analyze whether the addition of the proposed project could impact the current pollution load for low-income and minority populations. We also recommend that more specific information be provided as to the status of the residences closest to the LNG facility and associated pipeline interconnects and spur. We further recommend that more information be provided describing the extent to which the public participation in the

development of the final EIS involved low-income and minority populations that may be affected by FERC's proposed action. We also recommend that this additional information and analyses be addressed in the Commission's Order and made available in the docket.

Subject matter contact: Ms. Ntale Kajumba, 404-562-9620.

EVALUATION OF RISK ANALYSIS

Our risk analysis comment concerns a conclusion contained in the Conclusions and Recommendations Section 5.1.12 – Reliability and Safety. In the final EIS, FERC included the calculated thermal radiation and flammable vapor hazard distances for an accident or an attack on an LNG vessel. The final EIS utilizes a design spill created by a 1-meter hole in an LNG cargo vessel. A spill resulting from a 1-meter hole would generate a vapor cloud extending 9,776 feet (1.85 miles) to the Lower Flammable Limit (LFL). According to information on page ES-5 of the Executive Summary, the nearest residence is 1.0 mile from the marine transit route and terminal site. According to Section 4.7.1.1 of the final EIS, an existing industrial complex is located adjacent to the Casotte Landing site. Therefore, under the scenario developed by FERC, the vapor cloud could penetrate and possibly envelop the nearest residences and businesses. If an ignition source is present where the vapor cloud exists, it could produce an explosion and widespread fire. EPA believes that the proximity of the closest residences and businesses to a potential vapor cloud may warrant additional analysis and discussion in the Commission's Order to further justify the final EIS's conclusion that the risk to the public is not significant.

RECOMMENDATION (RISK ANALYSIS): EPA recommends that the FERC staff provide additional analyses regarding thermal radiation and flammable vapor hazard scenarios to more clearly demonstrate the conclusion of insignificant risk, and that these analyses be addressed in the Commission's Order and included in the docket.

Subject matter contacts: Ms. Phyllis Warrilow, 404-562-9198 and Ms. Ellen Rouch, 404-562-9575.

ONSHORE/WETLAND EFFECTS

EPA acknowledges the inclusion of additional information on compensatory mitigation in Section 4.4.5 of the final EIS. We find the range of mitigation options being considered by the applicant to be reasonable. Page 4-36 states that the mitigation options include "...restoration and enhancement of a local site and the purchase of mitigation credits from various mitigation banks and restoration projects". The final EIS states on page 4-36 that FERC is requiring the applicant to "...complete permitting and develop an agency approved wetland mitigation plan prior to construction...." We recommend that EPA, as well as other appropriate federal and state resource agencies, participate in the

review process for the wetland mitigation plan. We recommend that the offered mitigation ratios for mitigation banking be coordinated with the COE during the Section 404 permitting process. Even though the predicted 0.2 acres of losses for forested wetlands are minimal, we recommend that a mitigation ratio for forested wetland losses be provided due to their functional value. EPA also recommends that the draft mitigation plan and draft wetland restoration plan be made available in the docket.

Regarding the project-specific wetland restoration plan that the applicant would develop in consultation with the COE and Mississippi Department of Marine Resources (MDMR) (pg. 4-35), we agree that the proposed 80 percent restoration of wetland species after two years is acceptable. Moreover, if such re-vegetation is unsuccessful after three years of monitoring, we also support the proposed development of a remedial re-vegetation plan to ensure success. We further recommend that the draft wetland restoration plan should be addressed in the Commission's Order and made available in the docket.

RECOMMENDATION (WETLAND EFFECTS): EPA recommends continued coordination of the wetland mitigation plan for this proposed project and that a draft plan (as well as a wetland restoration plan) be made available in the docket, prior to finalization during the Section 404 permit process. In addition to the COE, we recommend that such consultations include other relevant federal and state resource agencies such as EPA and MDMR.

Subject matter contact: Mr. Ron Mikulak, 404-562-9233.